

Original Research Article

An epidemiological study to assess the determinants influencing decision of medical termination of pregnancy among women undergoing medical termination of pregnancy in maternity homes, in a metropolitan city

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ABSTRACT

Background: Unwanted pregnancy alone does not determine the decision to terminate pregnancy but a combination of factors influence each other to terminate pregnancy. This study was undertaken to know about the reasons for undergoing MTP. AIM: “An epidemiological study to assess the determinants influencing decision of medical termination of pregnancy among women undergoing medical termination of pregnancy in maternity homes, in a metropolitan city.”

Methods: Cross sectional study was conducted from December 2013 to December 2015. The study area was the maternity homes under Municipal Corporation. Women in the age group 19-49 years undergoing MTP, who gave consent were included in the study. Women in the age group <18 years undergoing MTP and women not in a state to participate in the study were excluded from study. The sample size for study was 199. Data was collected using semi structured validated questionnaire and analysed using IBM SPSS Version 21.0 statistical software. Association between variables was analysed using Chi-square test, Fisher’s exact test.

Results: All study subjects were married women. The mean age of the women undergoing MTP was 28.41 years. Illiteracy among wife and husband was (09.11%) and (10.55%) respectively. 54 (27.14%) subjects belonged to upper-lower socioeconomic class. The most common 123 (61.81%) reason for undergoing MTP was “completed family”, followed by “medical reason”.

Conclusions: Study results emphasize the need to encourage women for the use of FP methods.

Keywords: Socio-economic status, Use of any FP method, Reason for undergoing MTP

INTRODUCTION

Abortion is defined as termination of pregnancy before the foetus becomes viable (28 weeks of gestation), or termination of pregnancy when the foetus weighs approximately 1000 gm. Medical termination of

pregnancy (MTP) is safe and legal termination of pregnancy only on medical ground.¹

Almost all women in the reproductive age group have some risk of unwanted pregnancy. Termination of pregnancy is one of the oldest methods of terminating

unwanted births. Induced abortion is often viewed as one of the forms of birth control or as a termination of pregnancy due to contraceptive failure.²

Unwanted pregnancy alone does not determine the decision to terminate pregnancy but a combination of factors influence each other to terminate pregnancy. Women undergo abortion for a variety of reasons including birth control, pregnancy due to previous child too young, contraceptive failure, unplanned pregnancy, unmarried pregnant woman, completed family, do not want any more daughter, health problems, inadequate income, medical illness, etc.³⁻⁷

Termination of pregnancy may be legal (safe) or illegal (unsafe) based on the reason for termination, place where it terminated and by whom it is terminated.⁸ The medical termination of pregnancy act was passed in 1971 to reduce maternal morbidity and mortality resulting from unsafe abortions.

There is a need to make more women aware of contraceptive methods and the risk associated with MTP so that, unwanted pregnancy can be avoided safely and conveniently. So, this study was undertaken to know about the unmet need regarding FP, their reason for undergoing MTP.

Rationale of the study

The prevalence of medical termination of pregnancy has increased in recent years, but there is a significant gap in our understanding of multiple dimensions of abortion seeking behaviors.

This study shows the association between socio-demographic factors along with obstetric factors and the probable reason for induced abortion in women. Other purpose of this study was to find out the reason for abortion, contraception method used at the time of abortion and if no method is used; the reason for non-use.

Aim and objectives

Aim

“An epidemiological study to assess the determinants influencing decision of medical termination of pregnancy among women undergoing medical termination of pregnancy in maternity homes, in a Metropolitan city.”

Objectives

- To study socio-demographic and obstetric profile of women undergoing MTP and to assess determinants influencing decision regarding medical termination of pregnancy.
- Determine the correlation of the socio-demographic & obstetric variables with the factors influencing MTP decision.

- To provide recommendations for client-oriented, quality MTP services based on the study findings.

METHODS

Cross sectional study conducted from December 2013 to December 2015 among women undergoing MTP in study area during study period in Maternity homes under Municipal Corporation of Metropolitan city were study units.

Inclusion criteria

Inclusion criteria were women in the age group 19-49 years undergoing MTP; women who gave consent to participate in study.

Exclusion criteria

Exclusion criteria were women in the age group <18 years undergoing MTP as, it is a matter of legal concern; women not in a state to participate in the study e.g. women with haemorrhage, shock, sepsis, etc.

Sample size

The sample size for the study was calculated using the formula:

$$n = 4pqN / e^2 (N-1) + 4pq$$

For the value of ‘p’, a study undertaken in All India Institute of Medical Sciences, New Delhi was taken as a reference.⁹

Where p= Prevalence of most common determinant (i.e. enough children) for undergoing MTP in the above study = 56%

$$\text{So, } n = 198.99 = 199$$

So, the sample size for study was 199.

Two of the listed maternity homes were selected through simple random sampling technique. All women fulfilling inclusion criteria were included in the study. Permission to carry out the study was obtained from the Department of Community Medicine and also from appropriate authority of Municipal Corporation and the respective maternity homes. Approval for conducting the study was taken from the Institutional Ethics committee.

Data was collected using semi structured and validated questionnaire. Informed consent was obtained from participants. Face to face exit interview of participants was conducted to collect the data.

Data was analysed using SPSS statistical software version 21.0. Data was presented in the form of tables and necessary graphs. Quantitative data was expressed in

mean and percentage. Association between variables was analysed using statistical tests like Chi-square test, Fisher's exact test.

RESULTS

All 199 (100%) study subjects were married women. The mean age at marriage of the wife and husband was 21.41 years and 24.52 years respectively. The mean age of the women undergoing MTP was 28.41 years. The mean number of pregnancies not counting current pregnancy was 2.05. 35 (89.74%) subjects underwent abortion once and 4 (10.26%) subjects had abortions twice. 86 (46.73%) subjects have two live children. Most common reason 21 (48.84%) for undergoing last abortion was medical.

Table 1: Distribution of subjects according to their socio-demographic profile (n=199).

	Frequency	Percentage (%)
Type of family		
Nuclear	111	57.78
Joint Family	64	32.16
Three generation family	24	12.06
Total	199	100
Age at marriage (years)		
	Wife (%)	Husband (%)
≤19	69 (34.67)	13 (06.53)
20-24	94 (47.24)	97 (48.74)
25-29	36 (18.09)	60 (30.15)
≥30	00 (0.00)	29 (14.57)
Current age (years)		
20-25	30 (15.07)	7 (03.52)
25-30	106 (53.27)	54 (27.13)
>30	63 (31.66)	138 (69.35)
Education		
Illiterate	19 (09.11)	22 (10.55)
Primary education	42 (21.11)	24 (12.06)
Secondary education	49 (24.62)	79 (39.70)
Higher secondary education	64 (32.16)	42 (21.10)
Graduate	25 (12.56)	32 (16.08)
Total	199 (100)	199 (100)
Subjects occupation status		
	Frequency	Percentage (%)
Working	57	28.64
Not-working (Home-maker)	142	71.36
Socio-economic status		
Upper class	37	18.59
Upper-middle class	46	23.12
Lower-middle class	43	21.61
Upper-lower class	54	27.14
Lower class	19	09.55
Total	199	100

Table 2: Distribution of subjects according to their past obstetric profile.

	Frequency	Percentage (%)
Number of previous pregnancies		
0 (primi-gravida)	15	07.54
1	24	12.06
2	102	51.26
3	53	26.63
4	3	01.51
5	2	01.01
Total	199	100
Mean	2.05	
No. of abortions		
1	35	89.74
2	4	10.26
Couple having		
Male and female child	82	45.30
Only male child	61	33.70
Only female child	38	20.99
Total	181	100
Reason for undergoing MTP in the past		
Medical reason	21	48.84
Natural abortion	13	30.23
Danger to mother's life	5	11.63
Congenital child defect	4	09.30
Total	43	100

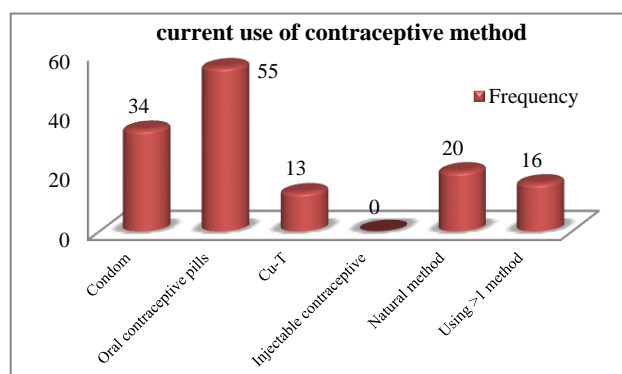


Figure 1: Distribution of subjects according to current use of type of family planning method (n=138).

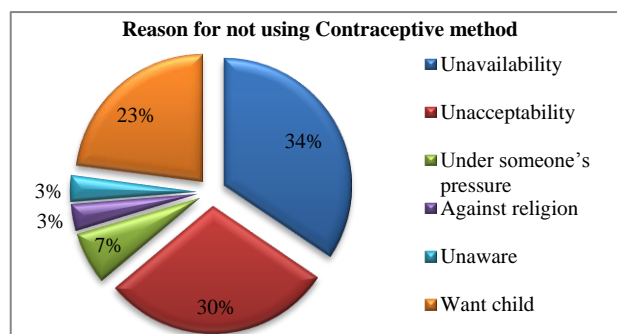


Figure 2: Distribution of subjects according to reason for not using FP method (n=61).

Table 3: Distribution of subjects according to their present obstetric profile (n=199).

	Frequency	Percentage (%)
Gestational age (weeks)		
≤5	14	07.04
6-8	101	50.75
9-12	78	39.19
>12	6	03.02
Current use of FP method		
Yes	138	69.35
No	61	30.65
Reason for not using FP method		
Unavailability	21	34.43
Unacceptability	18	29.51
Under someone's pressure	4	06.56
Against religion	2	03.28
Unaware	2	03.28
Want child	14	22.95
Total	61	100
Contraceptive method using currently		
Condom	34	24.63
Oral contraceptive pills	55	39.86
Cu-T	13	09.42
Injectable contraceptive	00	00
Natural method	20	14.49
Using >1 method	16	11.59
Total	138	100
Cause of present pregnancy		
Want child	14	07.04
Missed OCP	55	28.14
Condom slippage	21	10.05
Irregular use of contraception	109	54.77
Total	199	100

Unmet need for FP (%) = 61/199 = 30.65%; Condom use rate-out of total prevalence of contraceptive use rate was = 34/138 = 24.63%.

Table 4: Distribution of subjects according to reason for undergoing MTP (n=199).

Reason for undergoing MTP	Frequency	Percentage (%)
Incomplete abortion	5	02.51
Medical reason	27	13.57
Foetal anomaly	14	07.04
Financial problem	8	04.02
Completed family	123	61.81
Previous young child	16	08.04
Previous problem child	2	01.00
Marital problem	4	02.01
Total	199	100

Currently, couple protection rate was = 138 (69.35%). Condom use rate- out of total prevalence of contraceptive use rate was = 24.63%.

Unmet need for FP (%) = 23.12%.

Reasons for unmet need for family planning was unavailability of FP methods 21%, unacceptability 18%, wanted child 14%, under someone's pressure 4%, against religion 2% and unaware of FP method 2%.

184 (92.96%) pregnancies were unplanned, unwanted and/or due to contraceptive failure. Only 15 pregnancies were planned and needed to undergo MTP due to some medical reason. Medical reason includes congenital anomaly, uncontrolled hypertension, severe infections. 76 (38.19%) pregnancies were due to failure of contraceptive method. The most common 123 (61.81%) reason for undergoing MTP was "completed family".

The study shows significant association between

- Education and gestational age at the time of MTP (p value=0.0009<0.05).
- Couples having number of children and currently using FP method (p<0.001) and
- Between current age of women and use of FP method, (p=0.01388).

DISCUSSION

Socio-demographic and economic profile

Similar study conducted by Banga et al reported that all 100% (450) subjects those underwent abortion were married (Table 1).¹⁰ But similar study conducted by Patel et al observed that most (99.4%) women were married, 0.35% women were unmarried, 0.17% were separated from their spouse and 0.08% were widows.¹¹ The mean age of women undergone MTP was 28.41 years.

Similar findings were seen in study conducted by Sehgal et al, the mean age of women undergoing MTP was 27.6 years.⁹ Mittal et al observed that the age of women undergoing MTP ranged in between 20-45 years.¹²

Illiteracy observed in this study was similar to the DLHS-4 data.¹³ Many studies showed that literacy rate had impact on the determinants influencing the reasons for undergoing MTP.

Similar study conducted by Dhumale et al reported that majority of women i.e. 71.7% belonged to class IV, 22.3% belonged to class III, 3.3% belonged to class II and 2.2% belonged to class V and only 0.5% belonged to class I (Table 1).¹⁴ Many studies reported that the socio-economic status had impact on the use of FP method by women, their family size and the reason for undergoing MTP.

Table 5: Statistical association among different variables.

	Education of women			Total (%)
	Upto- secondary school (%)	Higher secondary school (%)	Graduation (%)	
MTP in GA (weeks)				
≤5	6 (05.45)	11 (17.19)	0	17 (08.54)
6-8	67 (60.91)	21 (32.81)	16 (64.00)	104 (52.26)
9-11	37 (33.64)	32 (50.00)	9 (36.00)	78 (39.19)
Total	110 (100)	64 (100)	25 (100)	199 (100)
Fisher's Exact test = 17.799, p=0.001				
Used FP method immediately after marriage				
Yes	65 (59.09)	34 (53.13)	14 (56.00)	113 (56.78)
No	45 (40.91)	30 (46.88)	11 (44.00)	86 (43.22)
Total	110	64	25	199
Chi Square test= 0.594, df=2, p=0.743, Fisher's Exact test=0.627, p=0.757				
Currently using FP method				
Yes	81 (58.70)	32 (23.19)	25 (18.12)	138 (100)
No	31 (50.82)	21 (34.43)	9 (14.75)	61 (100)
Chi Square test= 2.752, df=2, p value=0.258, Fisher's Exact test=2.681, p=0.258				
Currently using FP method				
Number of children	Yes (%)	No (%)	Total (%)	
1	20 (11.05)	28 (15.47)	48 (26.52)	
2	69 (38.12)	17 (09.39)	86 (47.52)	
3 or more	38 (20.95)	8 (04.41)	47 (25.96)	
Chi square test=26.376, df=2, p<0.001				

Past obstetric profile

184 (92.46%) subjects were multipara. Only 15 (07.54%) subjects were primi-gravida (Table 2). Dhumale et al reported that 32.06% women were gravida ≤2 and 67.93% women were gravida >2.¹⁴ It was seen that mostly multigravida women underwent MTP due to their completed family size, and only 15 primi-gravida women underwent MTP due to medical reason.

35 (89.74%) subjects underwent abortion once and 4 (10.26%) subjects underwent abortion twice (Table 2). Similar study carried by Dhumale et al reported that 57 (30.97%) women have previous single abortion and 54 (29.34%) women underwent abortion twice and 11 (5.97%) women underwent abortion thrice in the past.¹⁴ This finding indicates that women were considering abortion as a method of contraception.

The mean number of live children was 1.84. Holla et al reported that 34.4% women have one living child and 34.8% women have two living children.¹⁵ Many studies showed that the number of live children had impact on the reason for undergoing MTP.

181 subjects were distributed according to sex of their live children (Table 2). Patel et al reported that 21.9% women have no male child, 73.7% women have one or two male children irrespective of the number of female children. Women having three or more male children were only 4.3%.¹¹ The above studies show that the

decision of termination of pregnancy is dominated by the sex of living children. This study showed that proportion of women having one or more male children was high as compared with only female child.

Present obstetric profile

Maximum 115 (57.79%) women came for MTP at <9 weeks of gestational age (Table 2). Similar finding was reported by –Rokhade et al conducted a 10 years' duration retrospective study. The study reported that number of patients undergoing first trimester abortion has been steadily rising from 51% to 94.23%. While second trimester abortions reduced from 48.99% to 5.76%.¹⁶

Unmet need for FP was 23.11%. Though majority of the women were using some contraceptive method before undergoing MTP, they still needed to undergo termination of pregnancy (Table 3). The reason behind this could be the lack of awareness regarding correct and consistent use of contraception. So, there is need to improve the effective use of contraceptive methods by subjects. DLHS-4 reported that current use of family planning methods observed was 66.9% and 65.3% in urban population. Total unmet need for family planning was 19.0%, unmet need for spacing was 10.8%, and unmet need for limiting family size was 8.2%.¹³

Reasons for no use of family planning - Similar study conducted by Rahel et al reported that husband's disapproval (34.2%), lack of awareness (27.8%) and fear

of side effects (24.1%) were common reasons behind the unmet need (Table 3).¹⁷ Savita et al reported they have not used any contraception due to fear or lack of awareness. Others couldn't use OC-pills or IUCDs due to their side effects.¹⁸

Majority women were using barrier and hormonal method of contraception which needs sustained motivation for their regular and appropriate use (Table 3). They should be motivated to use IUD or sterilization as a method of contraception. DLHS-4 reported that female sterilization 53.9%, male sterilization 1.4%, OC pill use 1.7%, IUD use 1.6%, condom use 6.9% and any traditional method used 1.1%.¹³ Mittal et al reported that 38.002% were using barrier method, 18.31% were using IUD and 0.7% was using other methods.¹² The findings in this study were similar to the above reference study's finding but contradictory to the information reported by DLHS-4.¹³ The reason for the contradictory finding might be due to difference in study population of this study and DLHS survey. This study was undertaken in women undergoing MTP and DLHS-4 survey was undertaken in normal population.¹³

184 (92.96%) pregnancies were unplanned, unwanted and/or due to contraceptive failure (Table 3). Only 15 pregnancies were planned and needed to undergo MTP due to some medical reason. Contraceptive failure rate = 76/138 = 55.07%. Medical reason includes severe case of pre-eclampsia, uncontrolled hypertension, severe infections. Similar study conducted by Rokhade et al in a 10 years' duration retrospective study reported that commonest reason for MTP was failed contraception. The number of tubectomy failure was 3.42%.¹⁶ Holla et al reported that unplanned pregnancy was 34.8% and pregnancy due to contraceptive failure in 18.9%.¹⁵

The most common 123 (61.81%) reason for undergoing MTP was "completed family", followed by medical reason in 27 (13.57%), previous young child 16 (8.04%), foetal anomaly 14 (7.04%), financial problem 8 (04.02%), marital problem 4 (02.01%) and previous problem child 2 (01%) (Table 4). The above data shows that the most common reason for undergoing MTP was completed family. The next major reasons were medical cause, social factor, inadequate spacing and economical background. Following studies reported the indication for MTP in their study subjects. Mittal et al reported that in 59.9% women the indication for MTP was unplanned pregnancy and in 43.1% women the indication was failure of contraception.¹² Zodpey et al reported that family and domestic problems, poor socioeconomic status and short inter pregnancy interval were the important reasons quoted by abortion cases for seeking abortion in the current pregnancy. Only 1.80% of the cases reported failure of contraceptive method as a cause of seeking abortion services.¹⁹

CONCLUSION

Among these 39 women, 35 women underwent abortion once and four women underwent abortion twice in the

past. This finding showed that these women were considering abortion as a method of contraception and there is a need to change this attitude towards MTP.

Most of the women had used barrier method of contraception, OC pills and natural method of contraception which need motivation for correct and consistent use. Unmet need for family planning was due to the lack of awareness and fear of its side effects.

Contraceptive failure rate observed was 55.07%. This finding showed that there is need to improve knowledge of contraception among the women of study area and emphasis on the need for correct and consistent use of FP methods.

The most common reason for undergoing MTP was completed family and other reason were medical, social and economic. So the majority i.e. 184 pregnancies could have been prevented if those women had effectively used some of the method of contraception.

Recommendations

- Findings of this study indicates that there is an unmet need for FP. so, IEC activities need to be improved through RCH program, specially focusing on adolescent girls and women attending ANC clinics, PNC clinics, immunization clinics and under five clinics. This finding emphasises the need to improve the quality of Family planning awareness program through well trained health, NGOs and mass media. Health worker's training should be focused on the sensitive socio-cultural practice of the community.
- In the study subject majority women were found to be using either barrier method, OC pills or natural method for FP, which need regular use and strong motivation, leading to high chance of failure of contraception. For spacing between two children women should be motivated to use IUDs or injectable contraception. And couples having completed family should be motivated for accepting sterilization as a method of contraception. This can be best achieved by targeting women in PNC clinics, post-MTP women, immunization clinics and in Under-five clinics.
- There is a need to conduct more research in this field in different settings which will help in formulating policies and programmes keeping in mind the socio-cultural factors influencing the use of contraceptive methods.

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